

# How to reduce homelessness, drug and alcohol abuse, crime and poverty while saving money

Bill Warburton

Presentation to APEBC/CABE

November 10, 2022

# Five reasons

1. Social issues are mainly manifest among those who have not completed high school.
2. We can identify future non completers at age 10.
3. Random assignment
4. Interventions that are effective and cost-effective
5. Moving forward



We all have our preferred methods that we think are underused. My own personal favorites are cross-tabulations and graphs that stay close to the data



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# Social issues and high school

## Sample

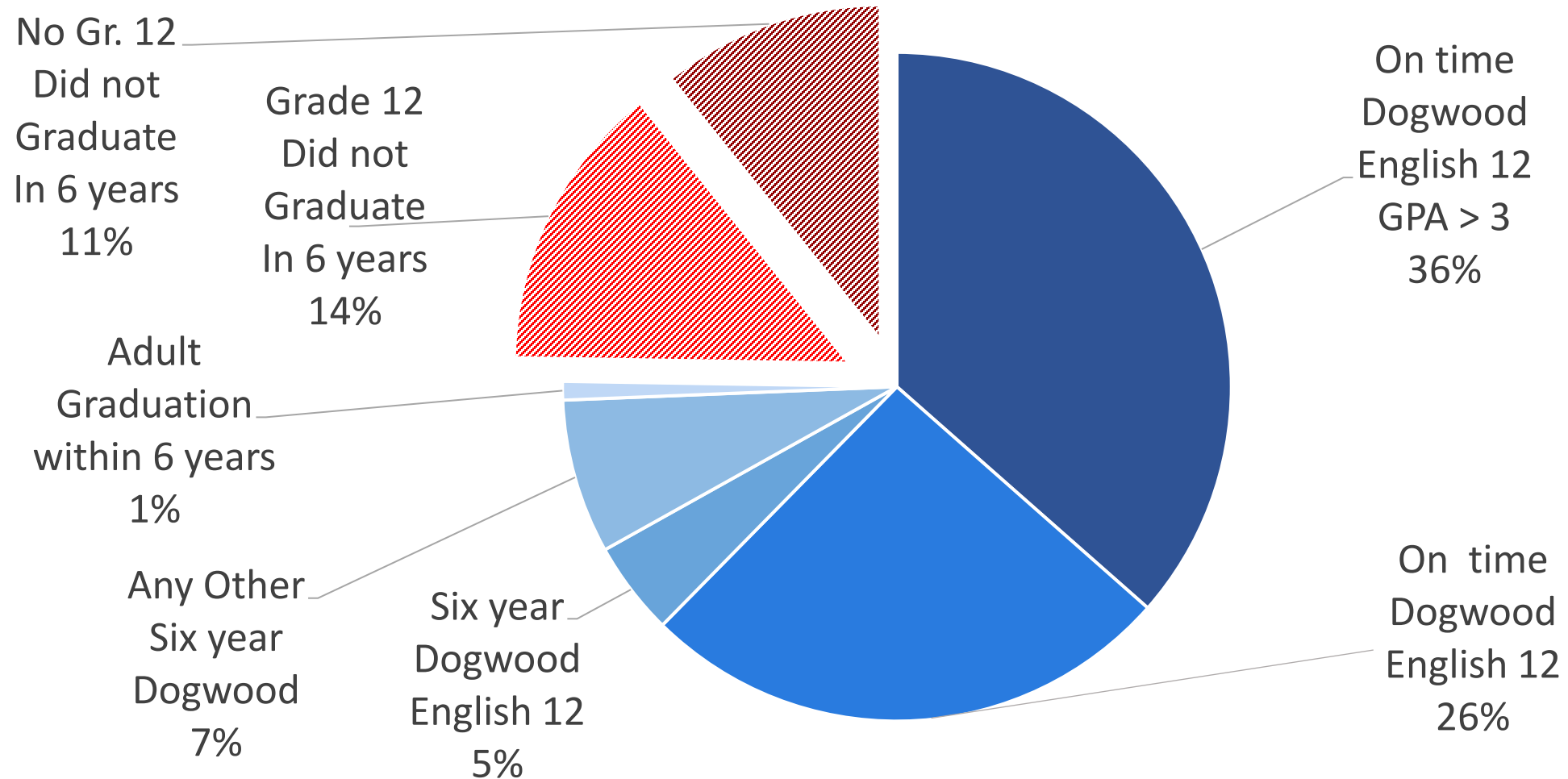
- Born 1976 to 1997;
- In BC education system;
- In BC at grad age

**1,089,331 students**

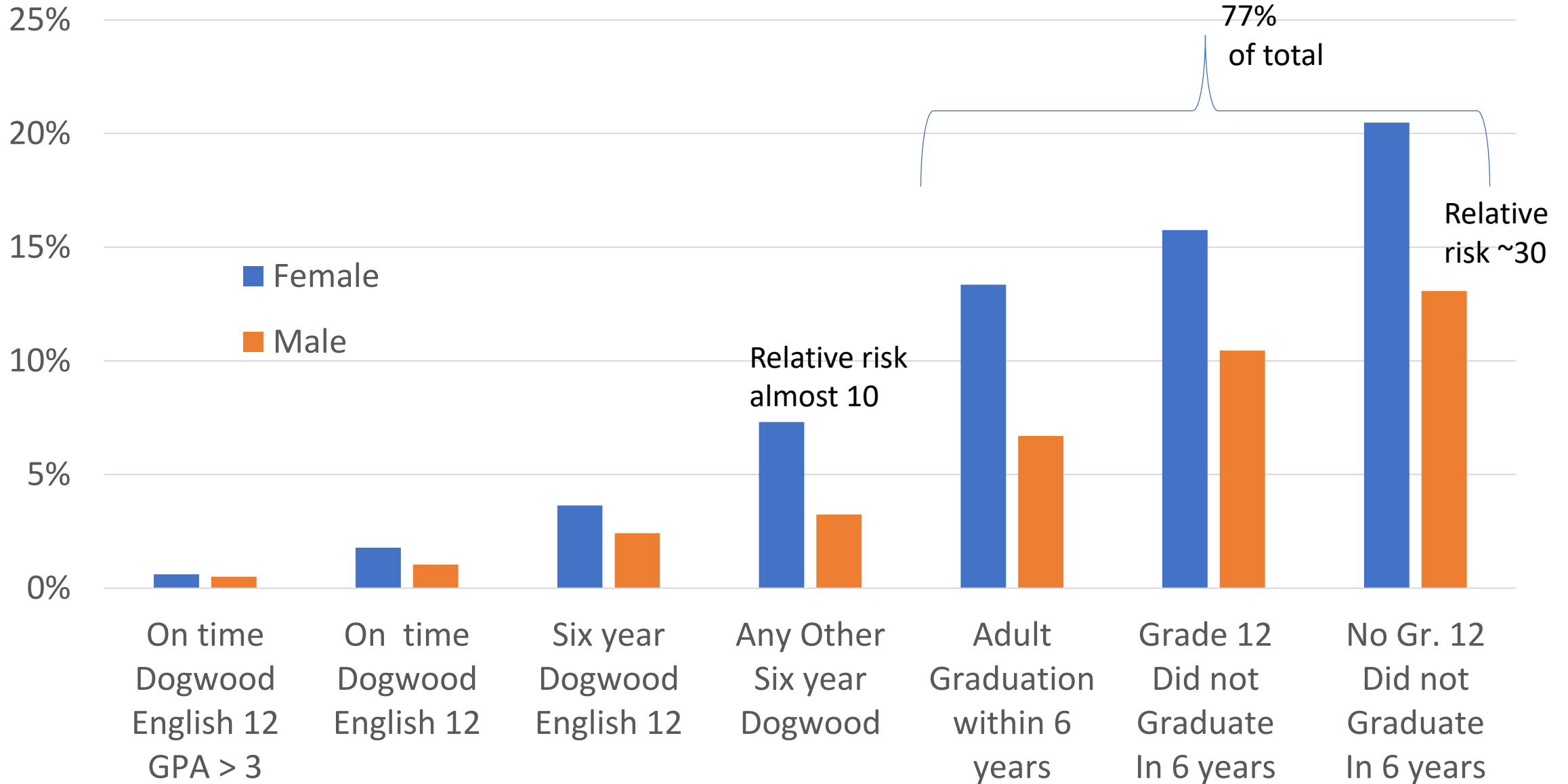
### Details:

- Were never registered with the BC education system as Non (BC) Residents;
- Were between the ages of six and sixteen when they were in grade 8;
- Excluded only homeschooled;
- Entered grade 8 before 2013; and
- Had linkable study ID's;

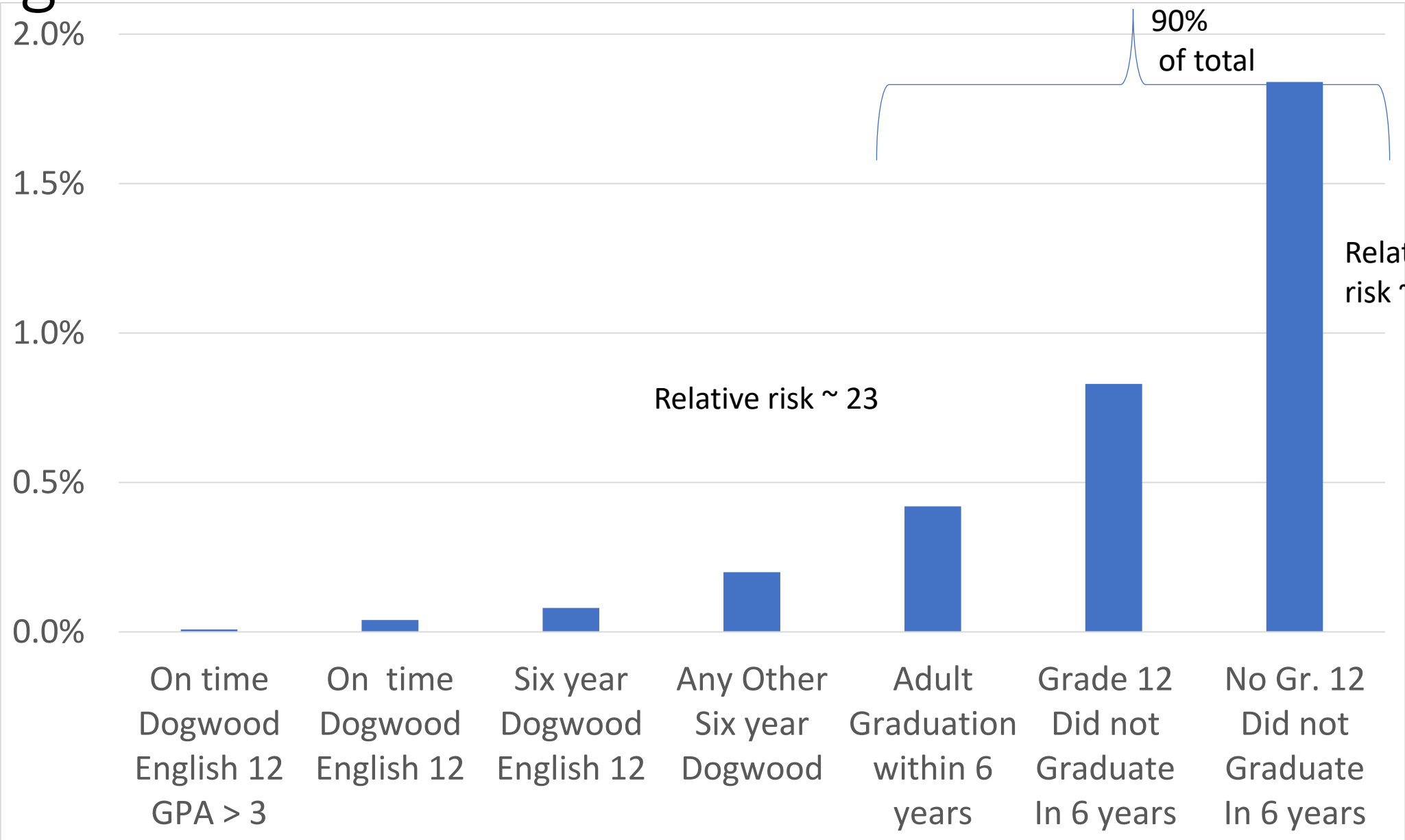
# Secondary attainment



# Income assistance (as a proxy for poverty)



# Having a child in care



90%  
of total

Relative risk ~ 23

Relative  
risk ~200

On time  
Dogwood  
English 12  
GPA > 3

On time  
Dogwood  
English 12

Six year  
Dogwood  
English 12

Any Other  
Six year  
Dogwood

Adult  
Graduation  
within 6  
years

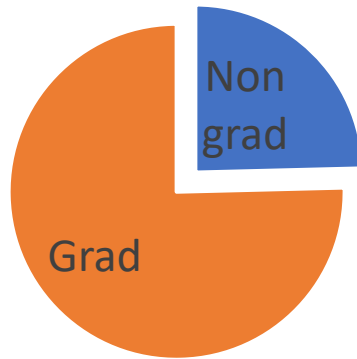
Grade 12  
Did not  
Graduate  
In 6 years

No Gr. 12  
Did not  
Graduate  
In 6 years

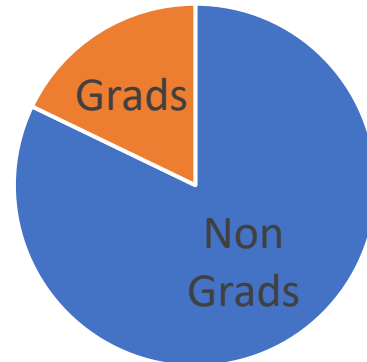


# Conclusion: Social problems are primarily manifest among those who did not do well in high school

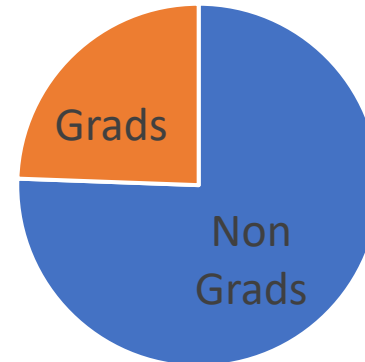
Sample



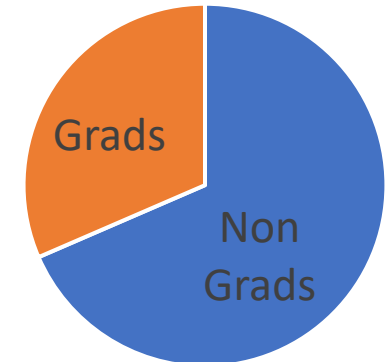
Homelessness in 2017



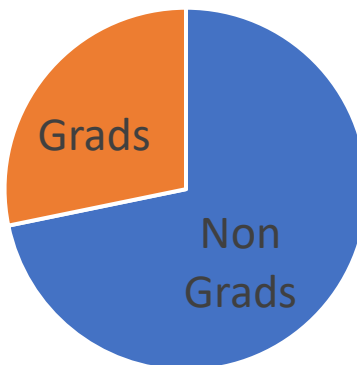
Corrections



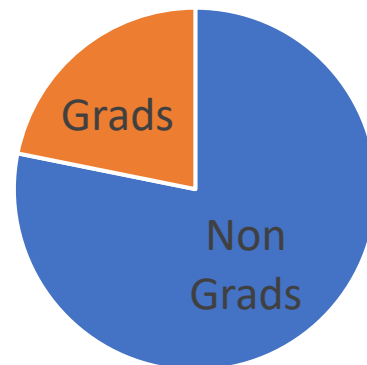
Drug poisoning Deaths



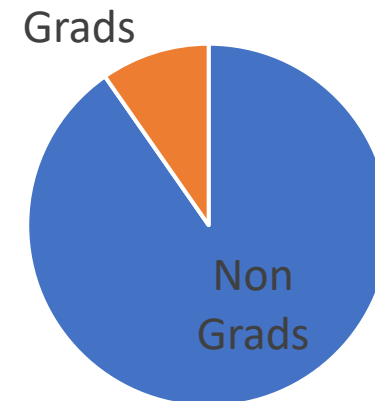
MSP-drug and alcohol



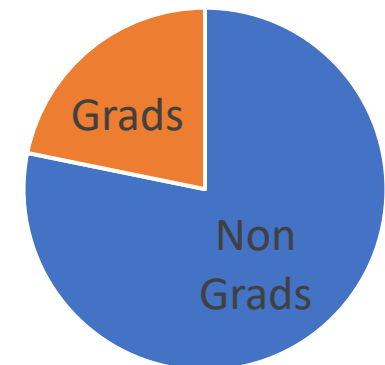
Rx: drug and alcohol



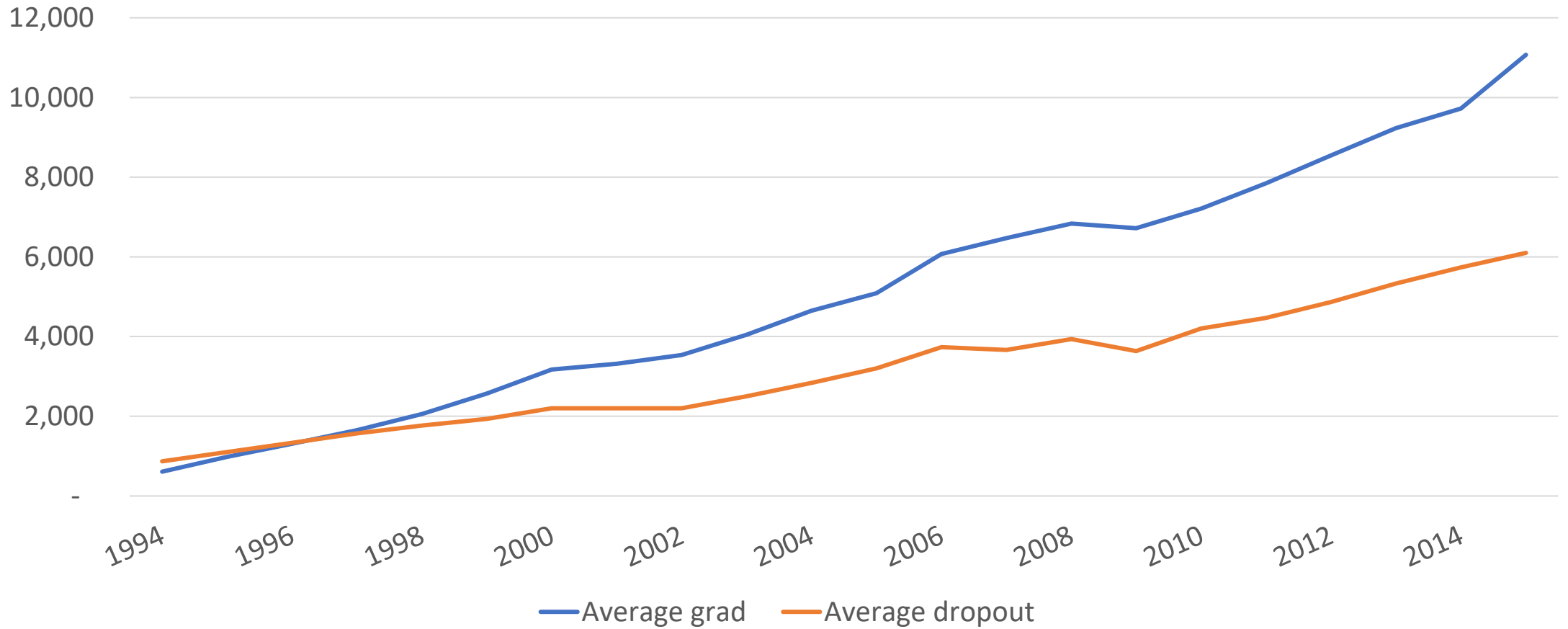
Children in Care



Income Assistance



# Taxes paid and high school graduation



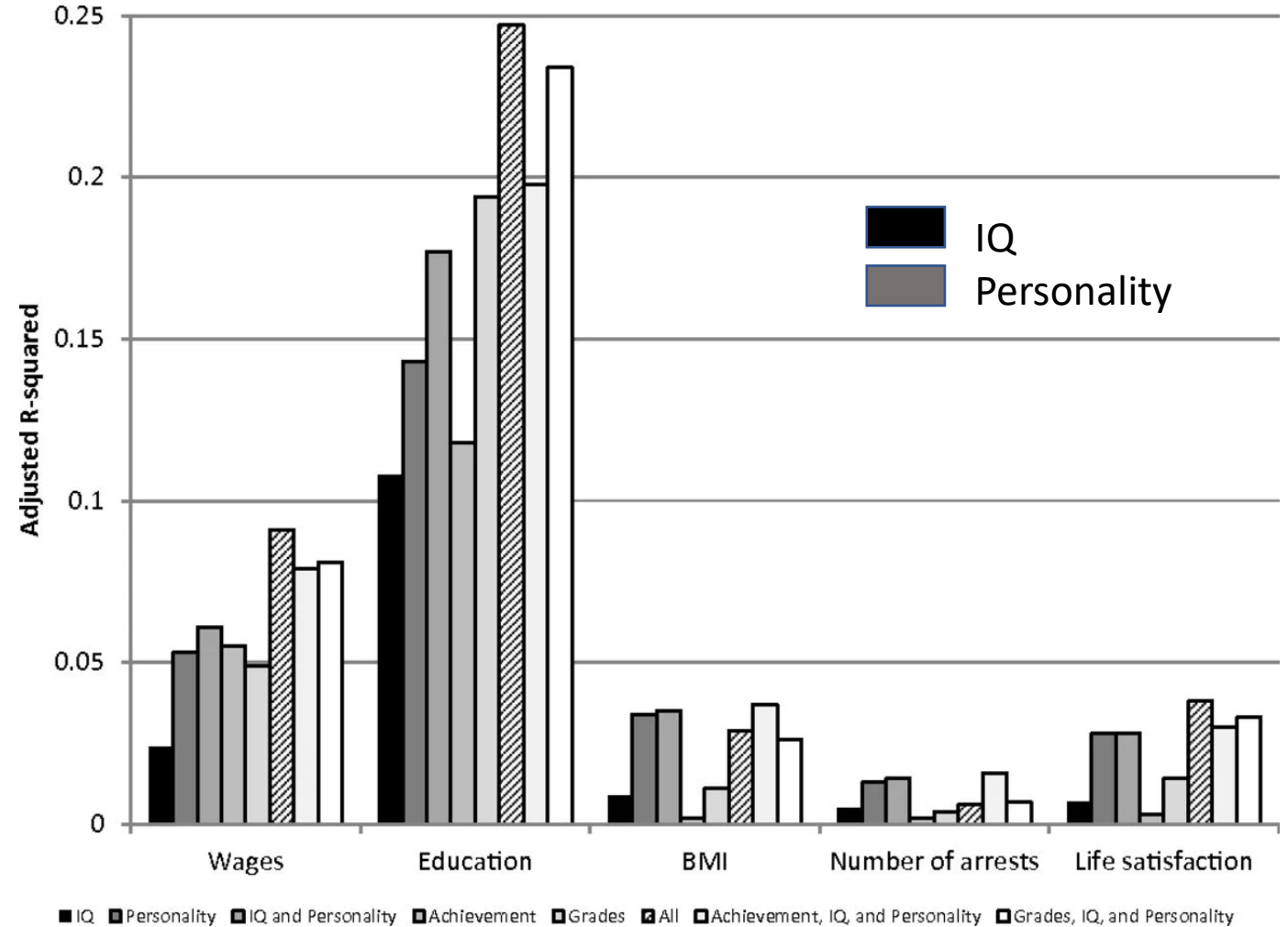


David E. Campbell, "What is education's impact on civic and social engagement," in *Proceedings of the Copenhagen symposium.*, 2006, pp. 25-126.

- Betsey Stevenson and Justin Wolfers, "Happiness inequality in the United States," *The Journal of Legal Studies*, vol. 37, no. S2, 2008.

Personality more important than  
IQ in predicting life outcomes

British Cohort Study 1970  
 Borghans, Lex, et al.  
 "What grades and achievement tests measure." *Proceedings of the National Academy of Sciences* 113.47 (2016): 13354-13359.



We can identify future non completers at age 10.

# Identifying future non completers

- Sample: 1999/2000 to 2005/2006 (about 250,000 students)
  - Less some special needs, those who entered or left the province
- Didn't use the 2002/2003 class
- Characteristics:
  - FSA scores,
  - Special needs codes
  - IA history
  - Use of the health care system
  - Family structure and stability
  - Contact with MCFD
- Linear probability model (OLS)

# Model

*In the Fragile Families Challenge, the simple benchmark model with only a few predictors was only slightly worse than the most accurate submission, and it actually outperformed many of the submissions*

Salganik, Matthew J., et al. *Proceedings of the National Academy of Sciences* (2020)



Of the  
2,000 most  
vulnerable  
children

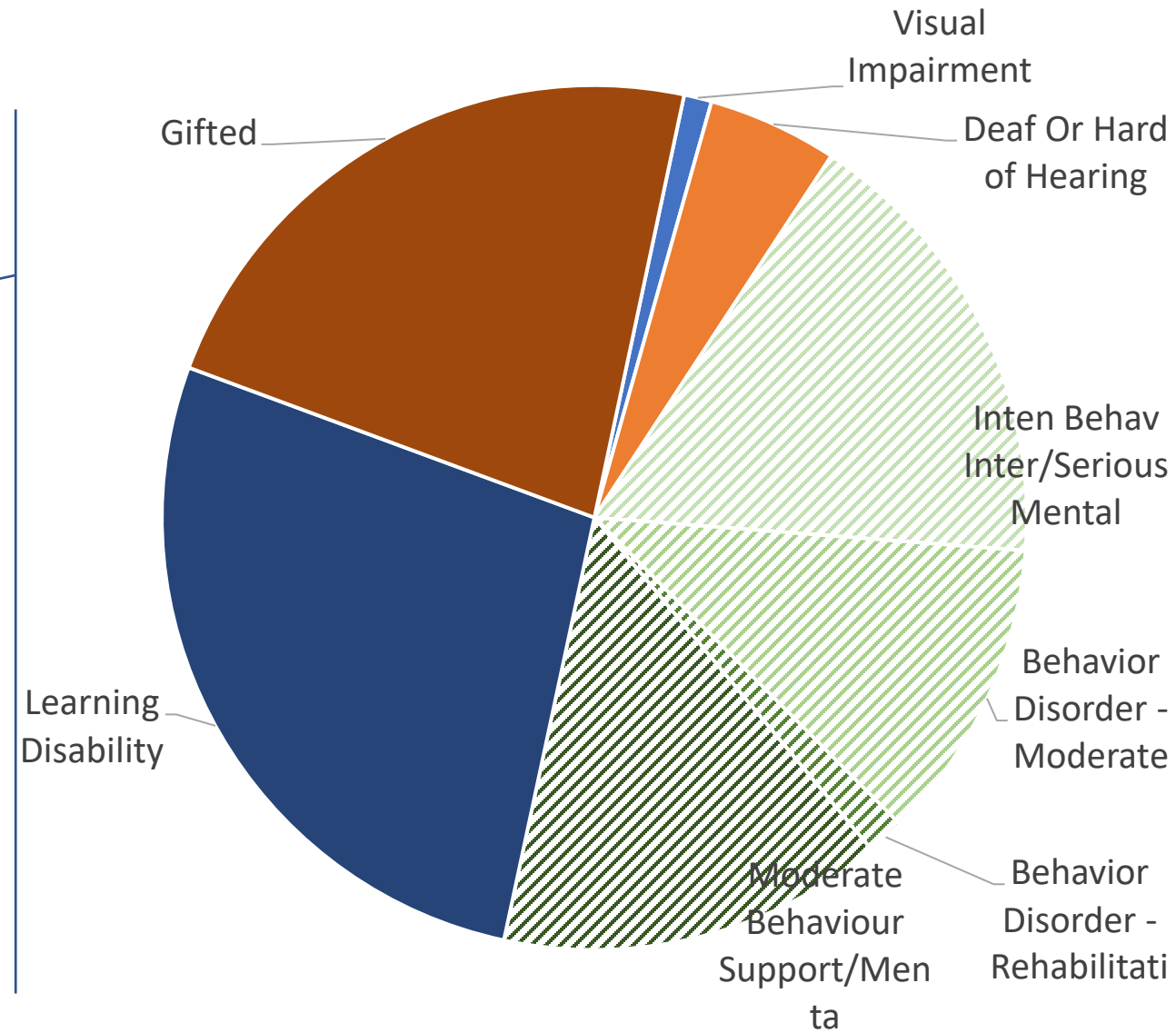
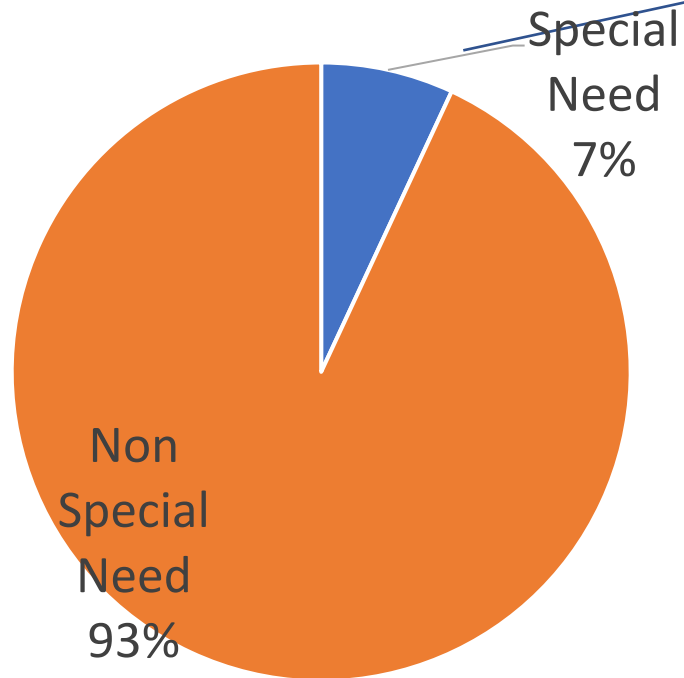
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69% did not graduate  
high school

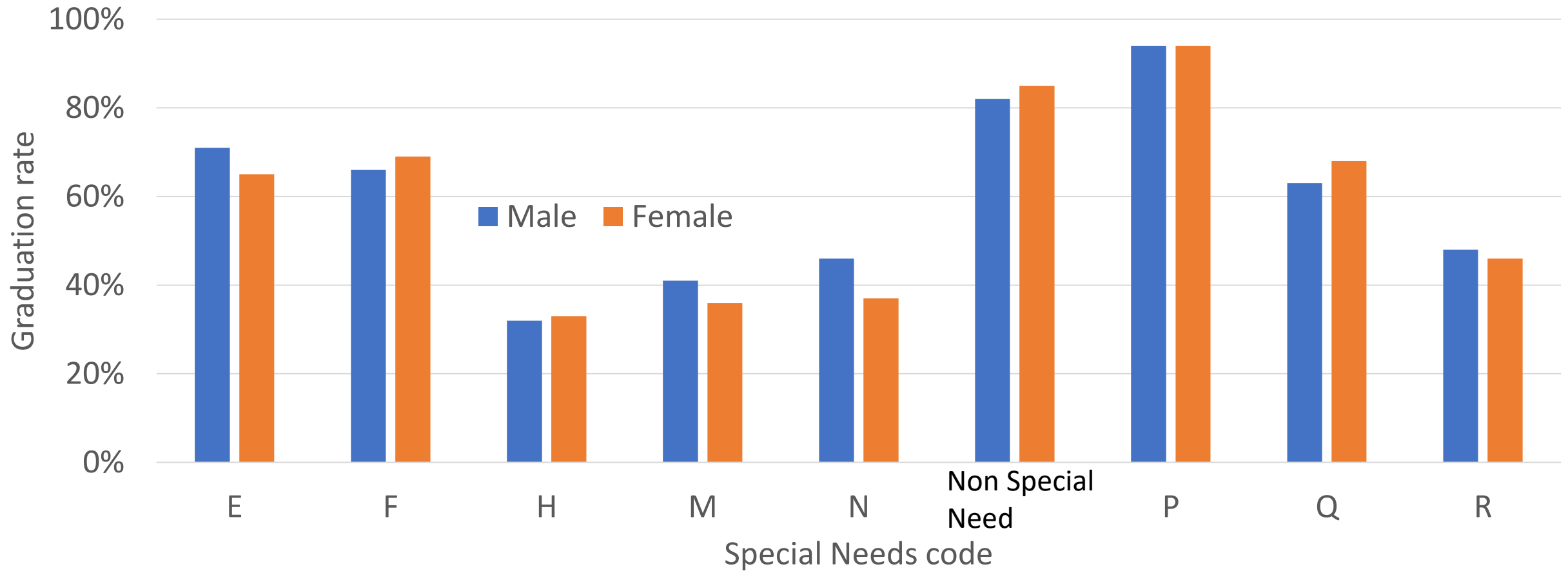
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Only 1% graduated on  
time with an average  
or better GPA

# Special Needs



# Special Needs

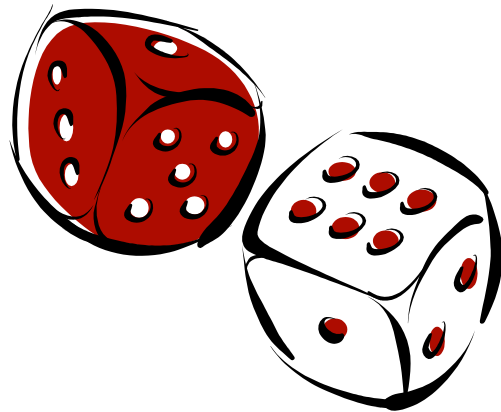


E	Visual Impairment	M	Behavior Disorder - Moderate	P	Gifted
F	Deaf Or Hard of Hearing	N	Behavior Disorder - Rehabilitati	Q	Learning Disability
H	Inten Behav Inter/Serious Mental		Non Special Need	R	Moderate Behaviour Support/Menta

Random assignment

# Random Assignment

The average value of any variable will be the same for the sample as for the population, provided that the sample is selected randomly. 1689



Jacob Bernoulli

# Random Assignment

- Hendry, D. F. "Econometrics-alchemy or Science? *Economica*." (1980): 387-406.
- Leamer, Edward E. "Let's take the con out of econometrics." *The American Economic Review* 73.1 (1983)
- LaLonde, Robert J. "Evaluating the econometric evaluations of training programs with experimental data." *The American economic review* (1986): 604-620.

# Random Assignment

- Comprehensive Employment and Training Act (1978)
  - Continuous Longitudinal Manpower Survey (CLMS)
  - Social Security Administration (SSA) earnings records from 1951 to 1979
- “impossible to determine which studies modeled the process correctly
  - Burt S. Barnow JHR 1987
- “The range of results within and across studies is disturbingly large and no particular point estimate can be said to be the correct one.”
  - ” [\(Stromsdorfer et al. 1985\)](#)

# Random Assignment

- Job Training Partnership Act (1982)
  - Comparison group from local labor market
  - Social Security Administration (SSA) earnings records
  
- “We present a rigorous definition of selection bias and find that in our data it is a small component of conventionally measured bias, but it is still substantial when compared with experimentally-estimated program impacts.”
  - [\(Heckman et al. 1998\)](#)



- Cochrane Collaboration
- Campbell Collaboration
- IES What Works Clearinghouse
- Evidence-Based Policymaking Commission

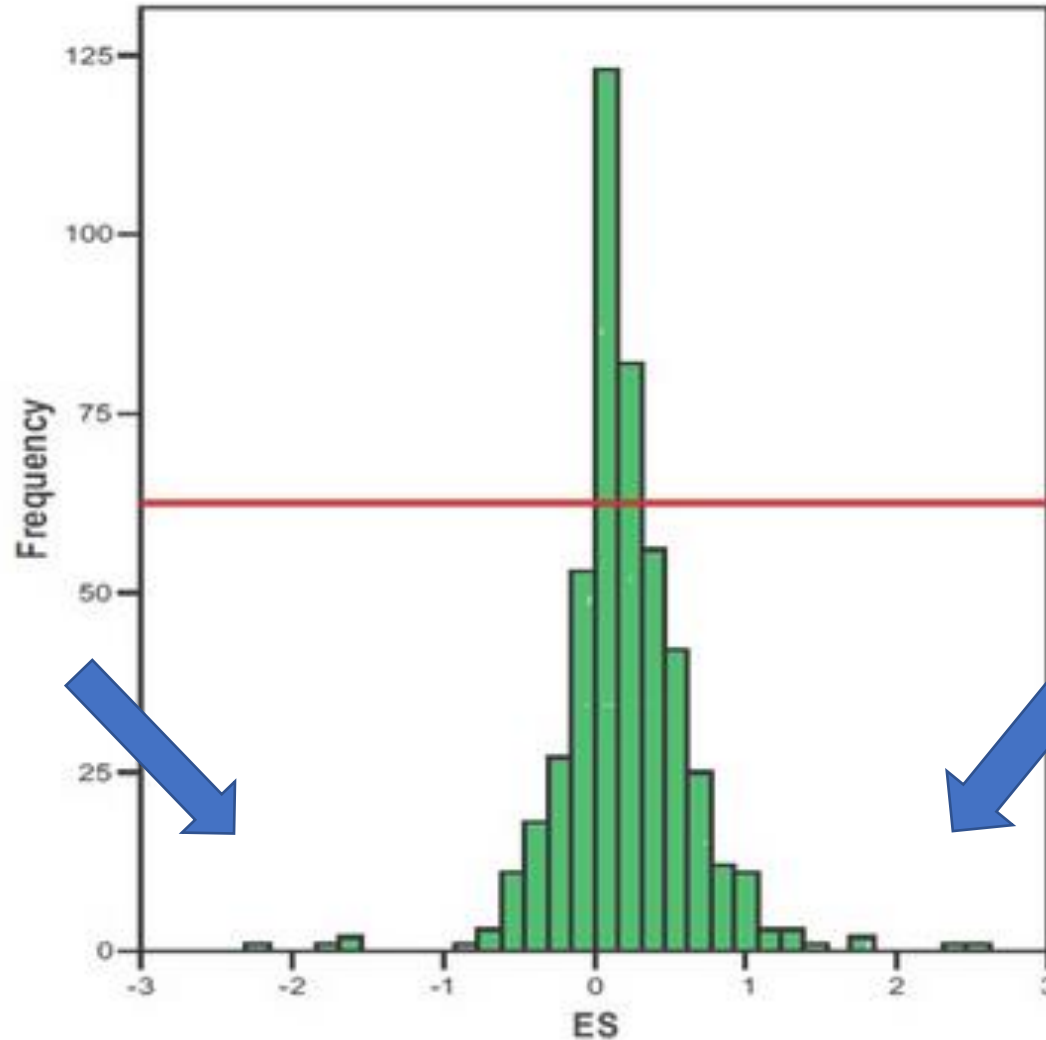
- Ron Haskins cochair of the Evidence-Based Policymaking Commission, [\(Haskins 2018\)](#) puts the failure rate at 70 to 80 percent for social programs
- IES: 91% were found to produce weak or no positive effects

# Interventions that are effective and cost-effective

- *Disruptive kids*  
*Tremblay AER 2022*
- Universal pre-K Boston  
Gray-Lobe 2022
- Abcedarian The Lifecycle  
Benefits of an Influential  
Early Childhood Program.  
Heckman et al

# Interventions that are effective and cost-effective

Histogram of Effect Sizes from  
Early Education Interventions [16, p. 587]



- *Scared Straight*, ([Petrosino et al. 2013](#))
- McCord, Joan. 2003. "Cures That Harm"
- Tennessee's pre-kindergarten ([Lipsey, Farran, and Hofer 2015](#))

- *Disruptive kids*  
*Tremblay AER 2022*
- Universal pre-K Boston  
Gray-Lobe 2022
- Abecedarian The Lifecycle Benefits of an Influential Early Childhood Program.  
Heckman et al

# Different impacts in different sites

- JTPA Impacts on youth
- Nurse Family Partnership
- Pre-K

# Public trust

How credible would the information be coming from...

58% → 48%



Academic

26% → 38%



Government

2017 Edelman Trust Barometer: Canada, sum of "extremely credible" and "very credible"

# Building trust

- New Zealand's Science Officer
- Evidence-Based Policymaking Act (Open data)
- Quebec's INESSS (Institut national d'excellence en santé et en services sociaux)
- Routine use of randomized trials

# Takeaways

1. BC has awesome data.
2. The origins of social issues occur early in life.
3. It easy to identify children who are at extreme risk at an early age.
4. There are many effective interventions.
5. Implementation issues are real.
6. Rigorous evaluation is essential



# Takeaways

7. We **can** reduce homelessness, drug and alcohol abuse, crime and poverty while saving money

billwarburton8@gmail.com